

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the following discussion is respectfully requested.

Claims 1-20 remain active in this case, Claims 1-20 were rejected and Claims 4, 5 and 6 were objected to because of formalities.

In the outstanding Office Action, Claims 4, 5 and 6 were objected to as including minor formalities requiring: Claims 1, 2 and 7-15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (US 6,150,868, hereinafter referred to as "Kim '868") in view of Kim et al. (US 5,929,691, hereinafter called "Kim '691") and Verwegen (US 6,147,546), Claims 3 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kim '868 in view of Kim '691 and Verwegen, and further in view of Saito et al. (US 6,320,800), Claims 4-6 and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kim '868 in view of Kim '691, and Verwegen, and further in view of Saito et al. and Kang (US 6,134,177), Claim 18 was rejected under 35 U.S.C. 103(a) as being unpatentable over Kim '868 in view of Kim '691 and Verwegen, and further in view of Potter et al. (US 6,308,230), Claim 19 was rejected under 35 U.S.C. 103(a) as being unpatentable over Kim '868 in view of Kim '691, Verwegen and Saito et al., and further in view of Potter et al. (US 6,308,230), and Claim 20 was rejected under 35 U.S.C. 103(a) as being unpatentable over Kim '868 in view of Kim '691 and Verwegen, Saito et al., Kang, and further in view of Potter et al. (US 6,308,230).

In response to the objection to Claims 4-6, the informalities noted have been corrected herewith, and accordingly, the objection to Claims 4-6 is believed to have been overcome.

Applicants respectfully traverse the outstanding ground for rejection, because in Applicants' view, the originally filed claims clearly patentably define over the cited prior art, for the reasons next discussed.

Contrary to disclosing a fuse which uses a laser, Kim '868 discloses an anti-fuse which is subjected to a dielectric breakdown when it is supplied with a large current. Therefore, the claimed invention and Kim '868 differ in respect to several points, next described below.

In particular, referring to the Kim '868 disclosure,

- (1) In FIG. 2 of Kim '868, the point of change of "reph" is before the point of change of "pgmb".
- (2) Even if ADDR of Kim '868 Figs. 1-2 changes from 0V to 6V, the potential of "node a" does not change.
- (3) While the Kim '868 circuit is being operated, ADDR must always be maintained at "H".
- (4) During anti-fuse programming, a flow-through current flows in the Kim '868 Figure 1 circuit as follows:
 - (a) "VCC" node → P2 → P3 → "HVCC" application point of P4
 - (b) "VCC" node → P2 → P3 → "grounding" point of N1
 - (c) "HVCC" application point of P4 → "grounding" point of N1
- (5) When the power is turned ON to the Kim '868 circuit, a flow-through current flows from "HVCC" application point of P4 to "grounding" point of N1.
- (6) The Kim '868 circuit is large in area since it requires many elements to perform the noted functionality.

The above-described phenomenon and problems arising from the operations of Kim '868 as above described do not occur in the claimed invention.

In regard to Kim '691, as was previously explained, the position of the fuse disclosed by FIG. 7 of Kim '691 and the position of the fuse disclosed by FIG. 6 (corresponding to Claim 1) of the present application are different. In other words, in FIG. 7 of Kim '691, fuse 31 is arranged outside two MOS FETs 23 and 24 (i.e. on the side of a power supply terminal), which configure an inverter. On the other hand, in FIG. 6 of the present application, the fuse is arranged inside two MOS FETs P1A and N1A (i.e. on the side of an output node), which configure an inverter. However, the claimed invention by virtue of this difference achieves advantages (1)-(5), described in the Request for Reconsideration filed April 11, 2006, which cannot be achieved by Kim '691. Further, none of Kim '868, Verwegen, Saito, Kang or Potter et al. of record discloses the above-described structure of the claimed invention. Therefore, it is respectfully submitted that the claimed invention is not obvious over these references.

Furthermore, Applicants respectfully submit that it is only based on hindsight that the outstanding rejection can possibly be sustained, insofar as the Kim '868 reference includes the conflicting teaching of not having the fuse 70 directly connected to a power source, as otherwise shown in Figure 7 of Kim '691. In the absence of any motivation to ignore this conflicting teaching, it is respectfully submitted that the outstanding rejection is based on improper "picking and choosing" of isolated teachings in the prior art, which of course is in contravention to the case law.¹

With respect to Claim 2, it is further noted that the first power supply potential is VDD, and the second power supply potential is Vss (= ground potential) (refer to FIG. 6).

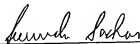
¹ In re Ehrreich and Avery, 200 USPQ 504, 510 (CCPA 1979).

Therefore, the circuit threshold voltage is $VDD/2$. The present invention is not obvious over the cited references for the reasons described above.

Accordingly, in view of the above comments, it is respectfully submitted that the outstanding grounds for rejection have been traversed. No further issues are believed to be outstanding, and the present application is believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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